@HumanomicsMap

Documenting and analysing SSH research

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Aalborg University Copenhagen

18 November 2020
OPERA Final Conference | Aalborg University Copenhagen

THE VELUX FOUNDATIONS
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EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY

European Commission

Ministry of Higher Education
and Science – Denmark

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Professor of Science Communication mso
Aalborg University

Head of Humanomics Research Centre

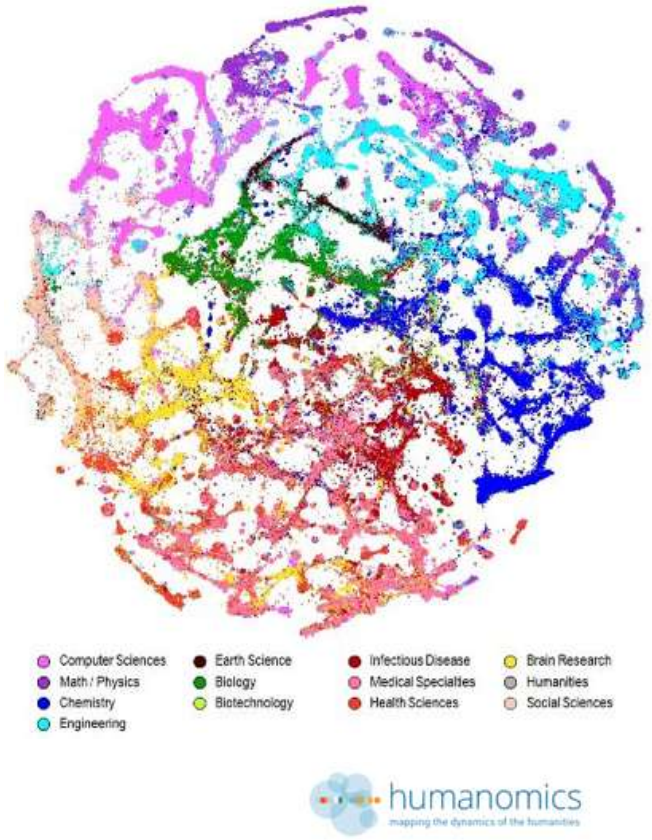
OPERA WP2 Lead

Science Policy Adviser, Danish Government
Chair of EU COST Expert Group on Science Communication
Funding Adviser on Algorithms, Data and Democracy (2021-2030)

humanomics
mapping the dynamics of the humanities

Humanomics Research Centre

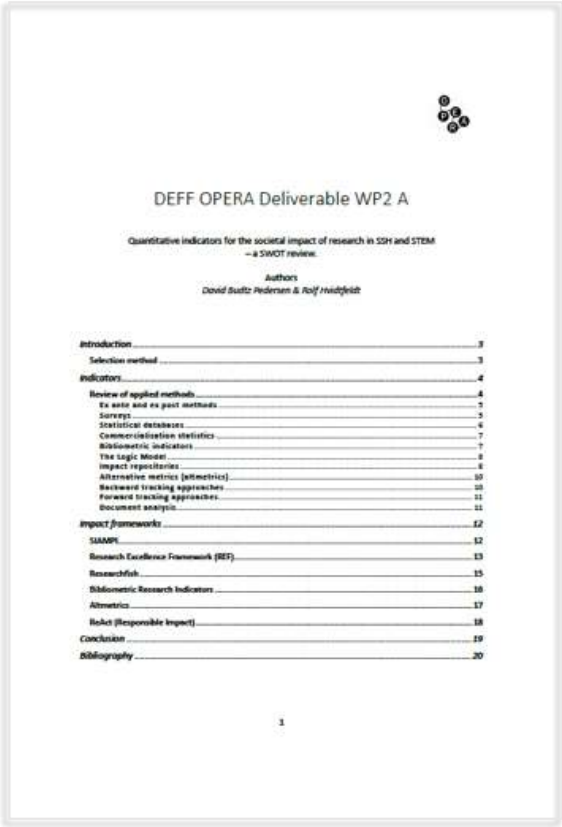
- Research-on-Research focused on studying and supporting the dynamic and impact of research.
- Diverse grant portfolio (Velux Foundation, Danish Council for Independent Research, European Commission, Danish Ministry of Science etc.)
- Projects: 'Mapping the Public Value of Humanities', 'Responsible Impact', 'Open Research Analytics' & H2020 ACCOMPLISSH



OPERA… Also the Humanities?

WP2 Objectives

- Enabling adequate documentation of humanities scholarship and social impact
- Case studies and mapping of best practices for ‘Documenting and analyzing SSH scholarship’
- Experimentation with metrics for academic output, collaboration, engagement and impact activities



DEFF OPERA Deliverable WP2 A

Quantitative indicators for the societal impact of research in SSH and STEM – a SWOT review.

Authors

David Budtz Pedersen & Rolf Hvidtfeldt

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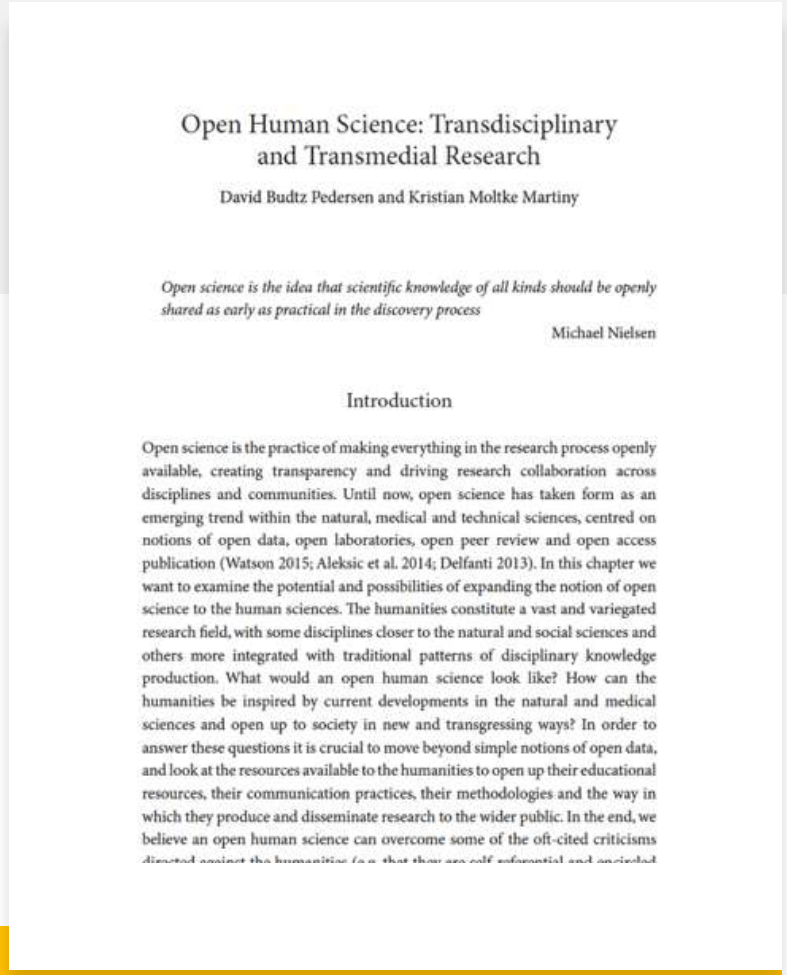
mapping the dynamics of the humanities

WP2 Participants

- David Budtz Pedersen, Aalborg University
- Birger Larsen, Aalborg University
- Marianne Lykke, Aalborg University
- Rolf Hvidtfeldt, Aalborg University
- Former: Pelle Annfeldt Israelsson, Aalborg University
- Former: Louise Amstrup, Aalborg University

Open Human Science

- Many different ways of producing tangible impacts across SSH disciplines
- Strong sentiment in SSH of open knowledge dissemination and science communication
- Interactions with society: media, culture, companies, expert advisory systems, public debate, start-ups, co-creation is norm rather than exception



Open Human Science: Transdisciplinary and Transmedial Research

David Budtz Pedersen and Kristian Moltke Martiny

Open science is the idea that scientific knowledge of all kinds should be openly shared as early as practical in the discovery process

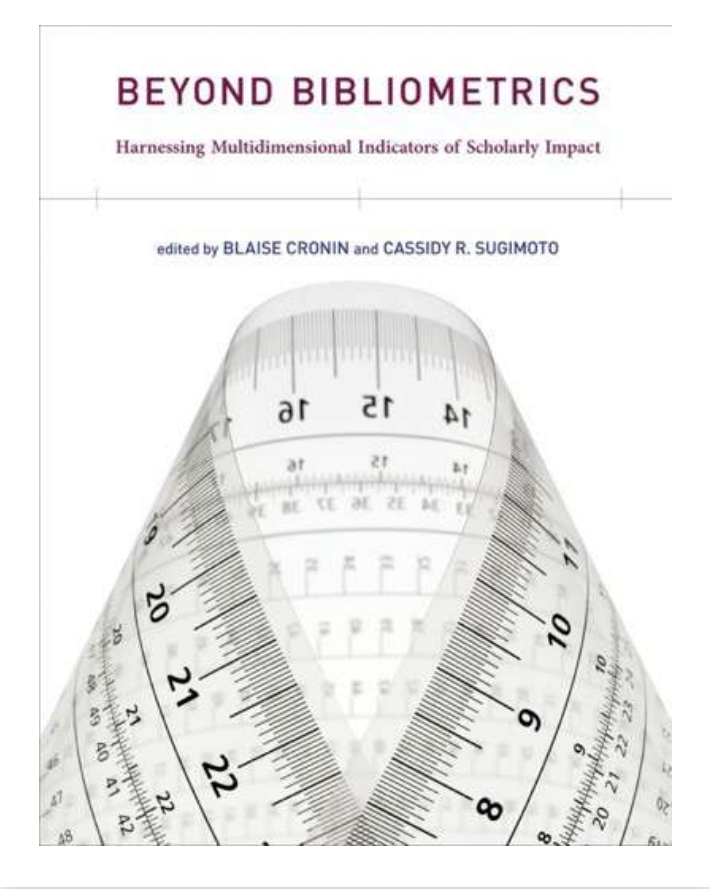
Michael Nielsen

Introduction

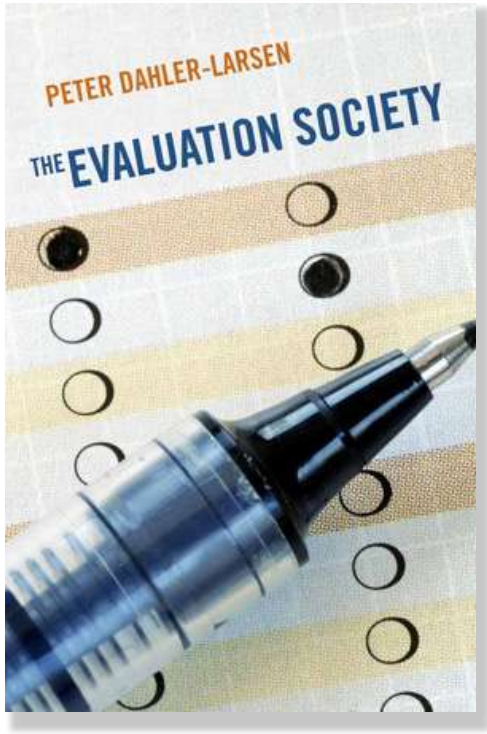
Open science is the practice of making everything in the research process openly available, creating transparency and driving research collaboration across disciplines and communities. Until now, open science has taken form as an emerging trend within the natural, medical and technical sciences, centred on notions of open data, open laboratories, open peer review and open access publication (Watson 2015; Aleksic et al. 2014; Delfanti 2013). In this chapter we want to examine the potential and possibilities of expanding the notion of open science to the human sciences. The humanities constitute a vast and variegated research field, with some disciplines closer to the natural and social sciences and others more integrated with traditional patterns of disciplinary knowledge production. What would an open human science look like? How can the humanities be inspired by current developments in the natural and medical sciences and open up to society in new and transgressing ways? In order to answer these questions it is crucial to move beyond simple notions of open data, and look at the resources available to the humanities to open up their educational resources, their communication practices, their methodologies and the way in which they produce and disseminate research to the wider public. In the end, we believe an open human science can overcome some of the oft-cited criticisms

Background

The (mis)measurement of open science

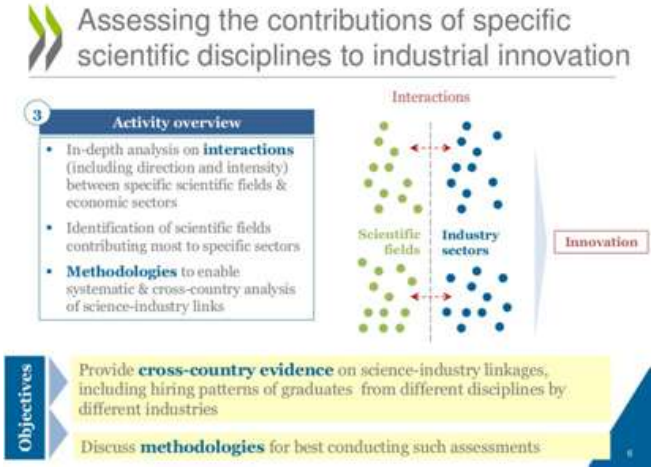


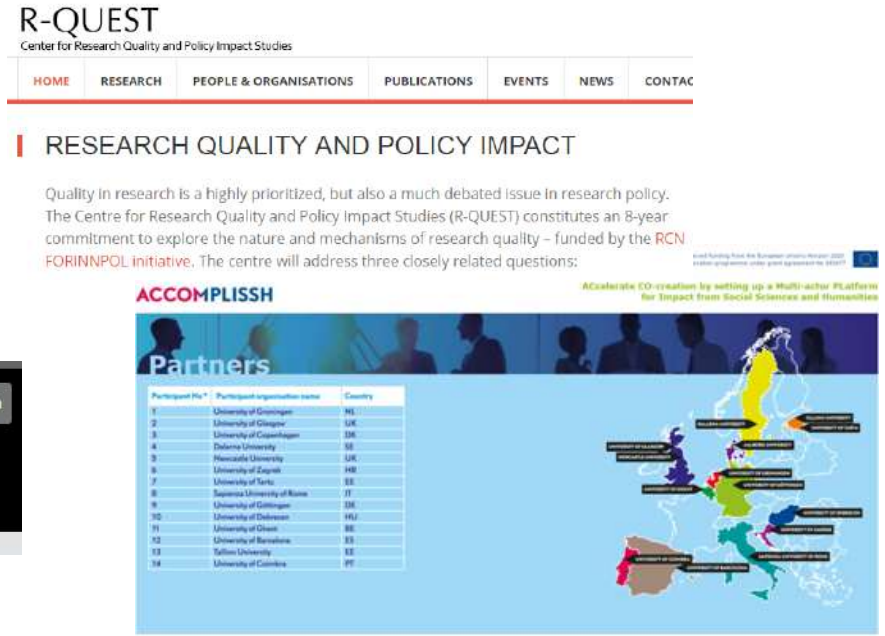
MEASURING
RESEARCH
WHAT EVERYONE NEEDS TO KNOW
CASSIDY R. SUGIMOTO
and VINCENT LARIVIÈRE


PETER DAHLER-LARSEN
THE EVALUATION SOCIETY

Productive interactions:
societal impact of
academic research
in the knowledge society
LERU position paper
March 2017
LE
RU

A hot topic in SSH





… OS Indicators part of a broader paradigm change in STI policies

- Increasing dissatisfaction with (closed) publication models
- Increasing public demands for Responsible Open Science & Innovation
- Increasing policy interest in multidisciplinary mission- and challenge-driven research including SSH-STEM collaboration
- Increasing emphasis on diversifying merit & promotion criteria
- Increasing access to new digital tools and metrics that represent and track the dissemination of research outputs (beyond bibliometrics)

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“**The evaluation gap** is the phenomenon… that the criteria in assessments do not match the character or goals of the research under evaluation or the role that the researcher aims to play in society.”

Wouters 2014

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Methods Review of SSH Indicators and Platforms

Assessment Methods

	REF	SIAMPI	Altmetrics	BFI	Researchfish	ReAct
Ex ante		■				
Ex post	■	■	■	■	■	■
Surveys		■				
Statistical databased	■	■				■
Commercialization statistics	■	■				
Bibliometrics	■	■	■	■	■	
Logic models					■	
Impact repositories	■					■
Altmetrics	■		■			
Impact-tracking (from process)	■	■			■	
Impact-tracking (from outcomes)	■				■	
Document analysis	■	■		■		

Table 1

Research Assessment Indicators

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SIAMPI EU FP7 Project

Direct interactions (Personal interaction between stakeholders)	Indirect interactions (Interaction between stakeholders through media or 'carriers')	Financial interactions (Material interaction between stakeholders)
Face-to-face interactions	Articles	Research contracts
Phone	Books	Facility, instruments, sharing
E-mail	Annual plans	Start ups
Video conferencing	Reports	Contribution 'in kind' (people)
Radio, tv or internet	Web pages	IPR arrangements
Mobility arrangements	Clinical guidelines	Project grants
Meetings	Designs	Lump sum grants
Conferences	Models	Professional training
Chance encounters,	Musical arrangements	Patents
Old friendships	Exhibitions	Licenses
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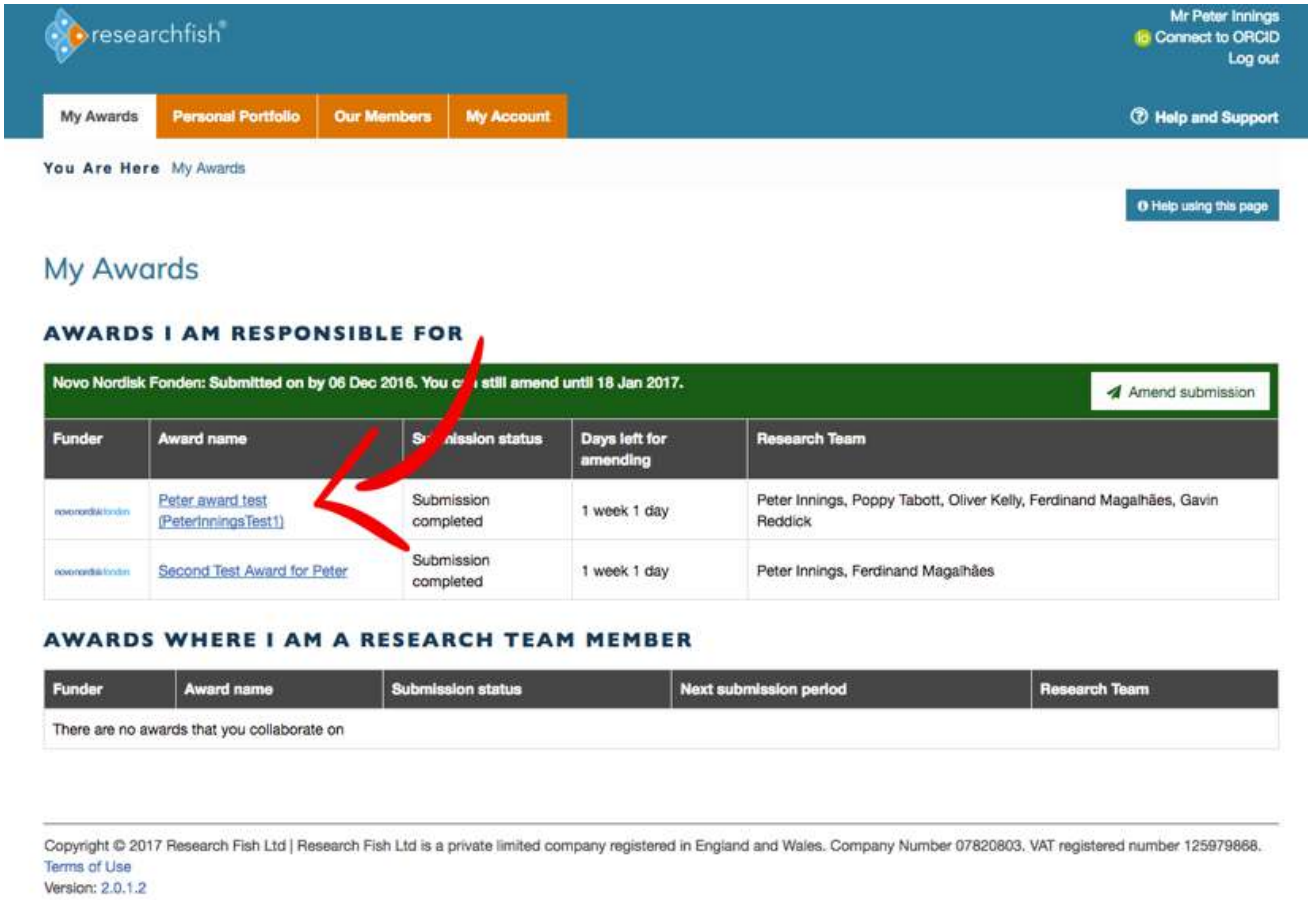
Social impact		
Behavioural change	Uptake, use	Collaboration
Methods		
Interviews, focus groups	Quantitative data	Reports or similar documentation


researchfish
Mr Peter Innings
Connect to ORCID
Log out
My Awards
Personal Portfolio
Our Members
My Account
Help and Support
You Are Here My Awards
Help using this page
My Awards
AWARDS I AM RESPONSIBLE FOR
Novo Nordisk Fonden: Submitted on by 06 Dec 2016. You c still amend until 18 Jan 2017.
Amend submission
Funder
Award name
Submission status
Days left for amending
Research Team
Peter award test (PeterInningsTest1)
Submission completed
1 week 1 day
Peter Innings, Poppy Tabott, Oliver Kelly, Ferdinand Magalhães, Gavin Reddick
Second Test Award for Peter
Submission completed
1 week 1 day
Peter Innings, Ferdinand Magalhães
AWARDS WHERE I AM A RESEARCH TEAM MEMBER
Funder
Award name
Submission status
Next submission period
Research Team
There are no awards that you collaborate on
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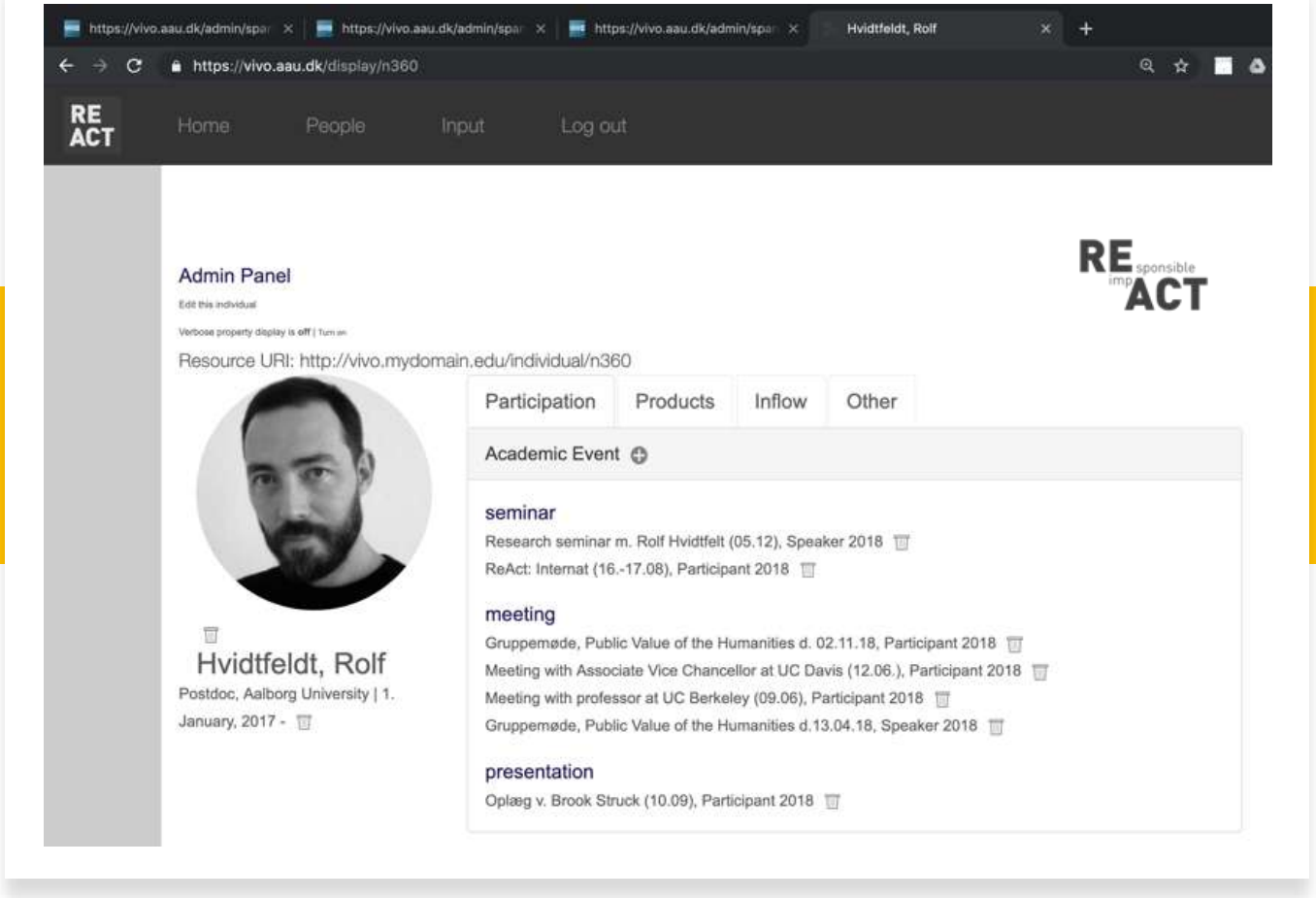
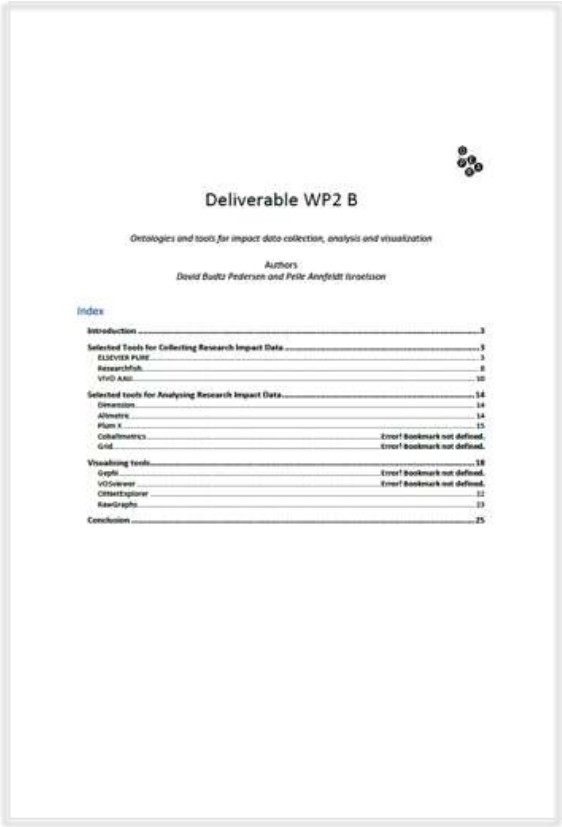


ViVO ReACT Impact Platform

… Also the Humanities

<u>OPERA WP2B</u>

- Review of ontologies for collection, analysis and visualization of SSH output and activity data



Deliverable WP2 B

Ontologies and tools for impact data collection, analysis and visualization

Authors
David Budtz Pedersen and Pelle Annfeldt Israelsson

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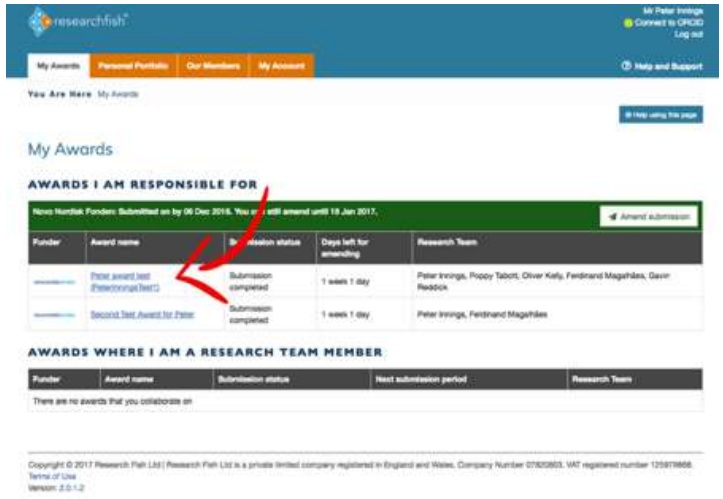
- PURE’s Basic Activity Typology

Attending an event
Conference organisation or participation
Organisation or participation in workshops, courses, or seminars
Public/private sector consultancy and other employment
Employment with any other public or private company including your own company
Consultancy
Public Sector Consultancy
Starting your own company
Editorial work and peer review
Peer review of manuscripts
Journal editor
Series editor
Editor of unfinished research anthology/collection
Examination
External examination
Internal examination
Hosting a guest lecturer
Hosting a guest lecturer
Memberships

- Researchfish Basic Activity Typology



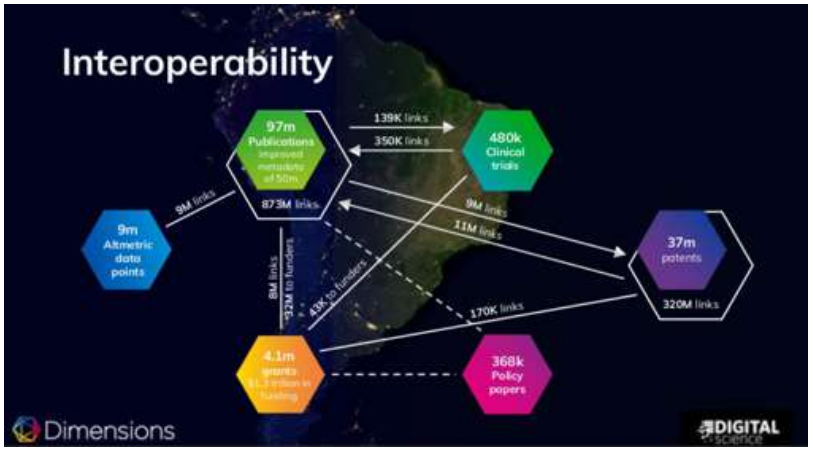
Publications
Collaborations

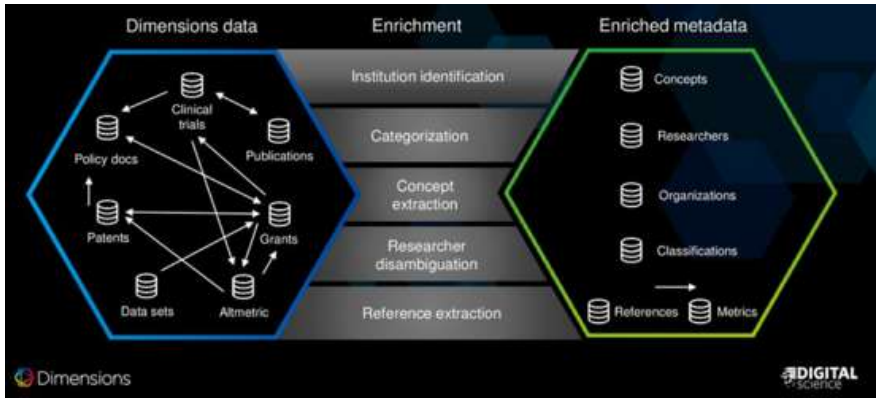
Sample of policy impact indicators in Researchfish:

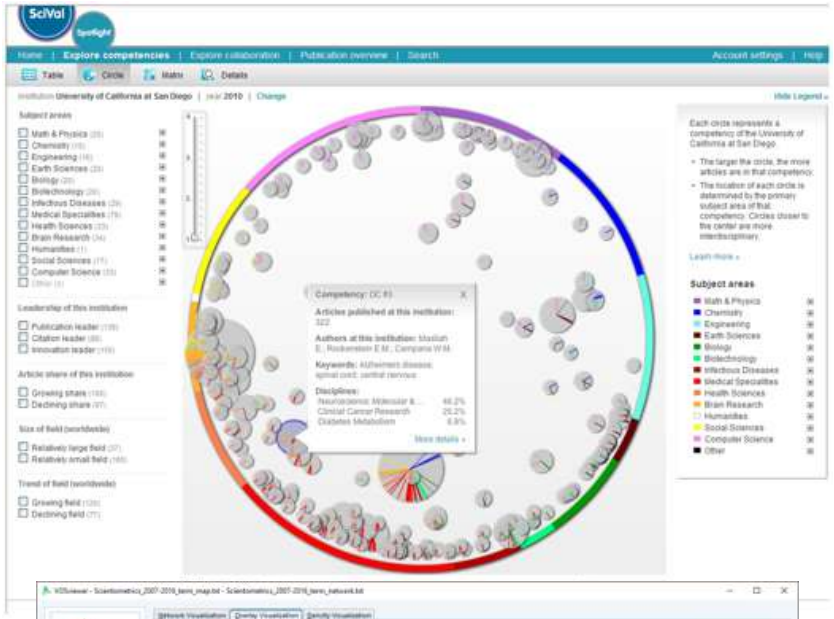
Implementation circular/rapid advice/letter to e.g. Ministry of Health
Influenced training of practitioners or researchers
Citation in clinical guidelines
Citation in clinical reviews
Citation in other policy documents
Citation in systematic reviews
Membership of a guidance committee
Participation in a national consultation
Participation in advisory committee
Gave evidence to a government review

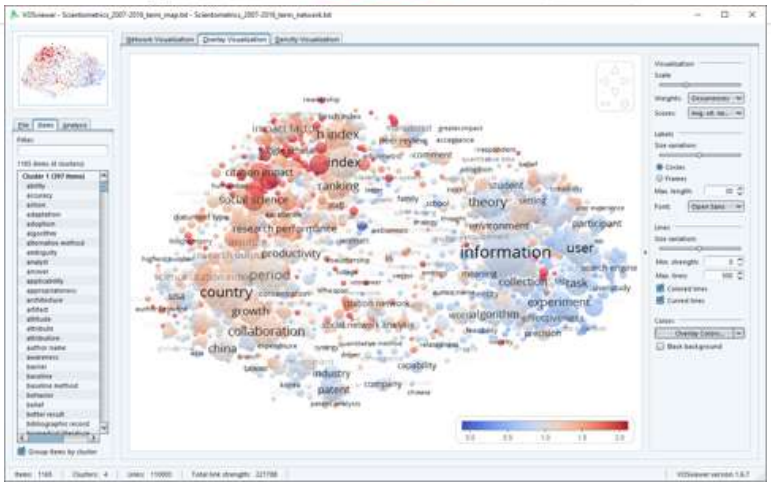
Other Outputs & Knowledge / Future Steps
Use of Facilities & Resources

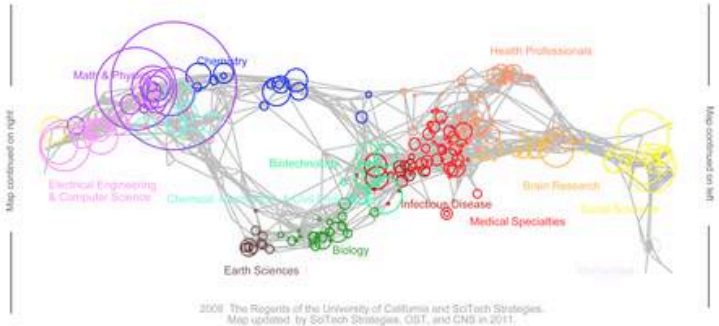
- Dimensions' input and output data typology





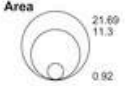


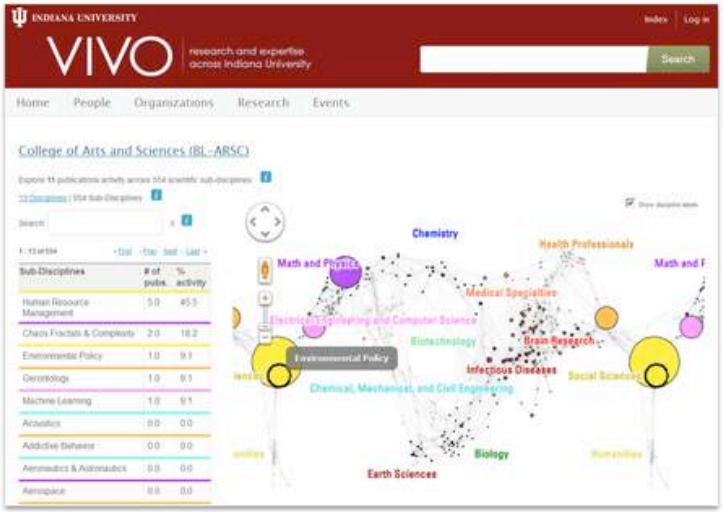




Legend
Circle area: Fractional Journal Count
Unclassified = 21
Minimum = 0
Maximum = 78
Color: Discipline
See end of PDF for color legend.

Area



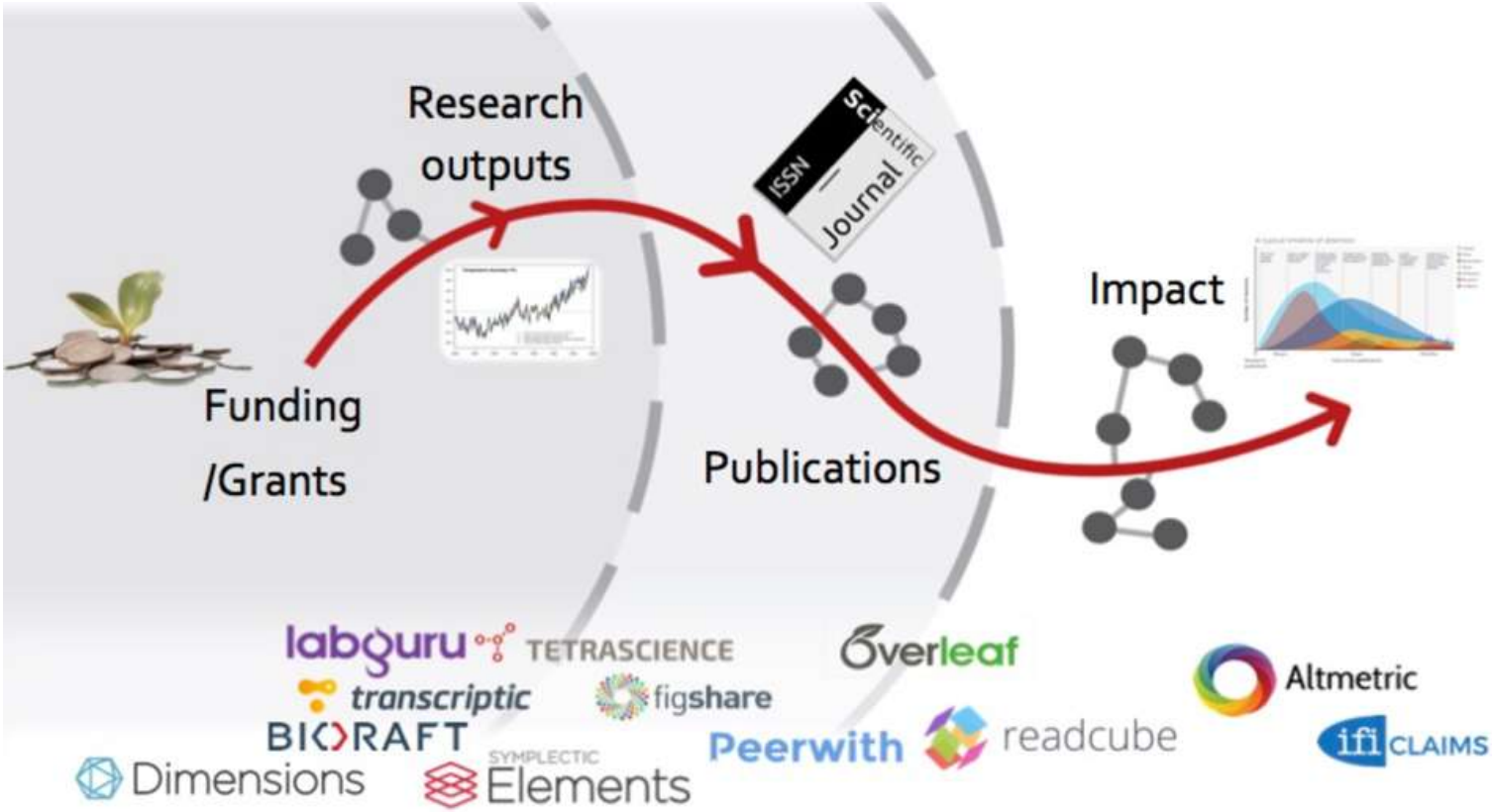


Some findings

Reviewed platforms, tools and ontologies

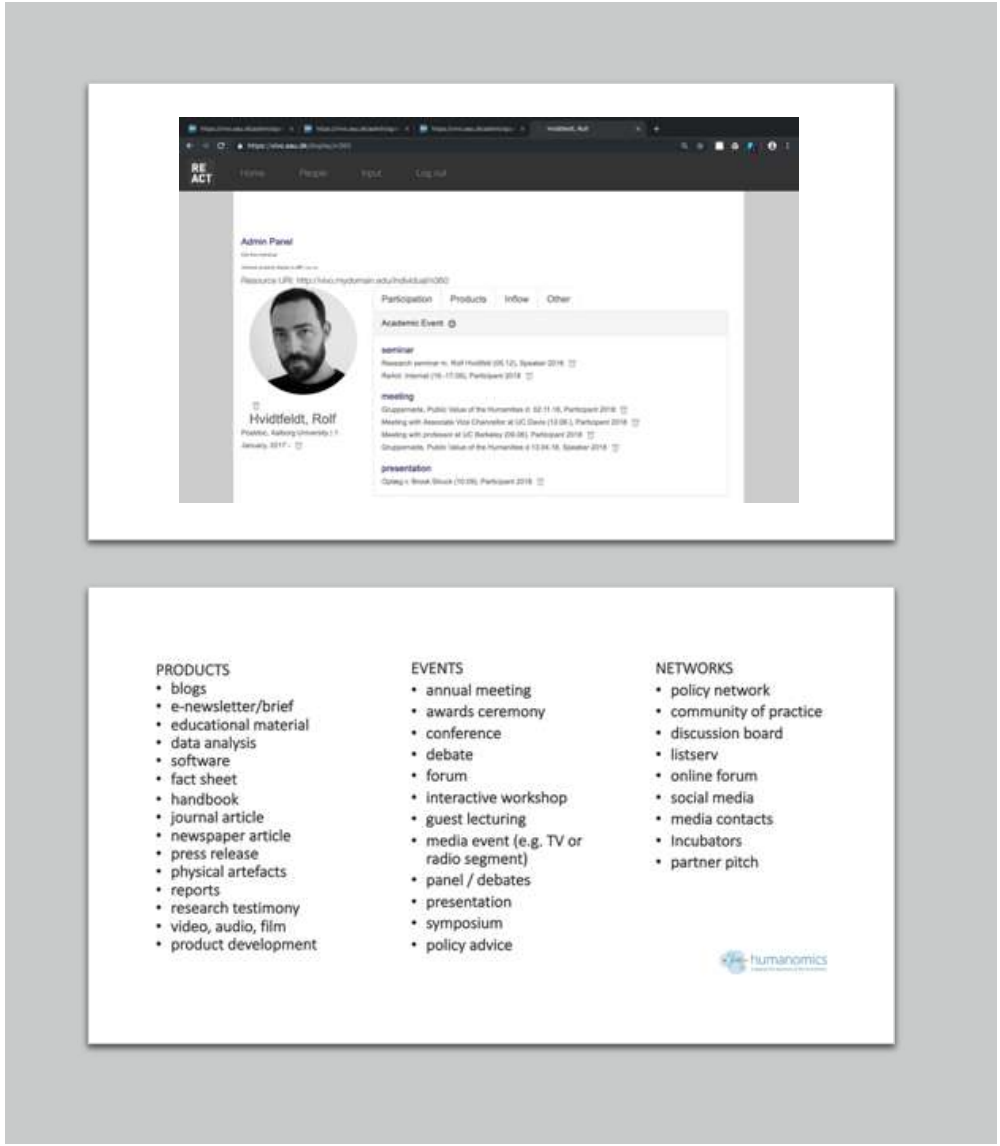
1. Publication-centric data analytics
2. Plenty of space for SSH to experiment with, register and analyse Open Science activities and publication performance
3. Impact of research leaning slightly towards health- and tech-centric indicators (patents, grants, clinical trials, policy reports).
4. Performances e.g. data, curation, artefacts, exhibitions, educational programmes, advise, media, networks, partnerships less visible
5. Limited possibilities for co-design of metrics with stakeholders and researchers (Researchfish®, Pure, BFI, REF etc.)

The linear fallacy



Baseline assessment and metrics for SSH needs more context data

- ReACT VIVO Basic Activity Typology

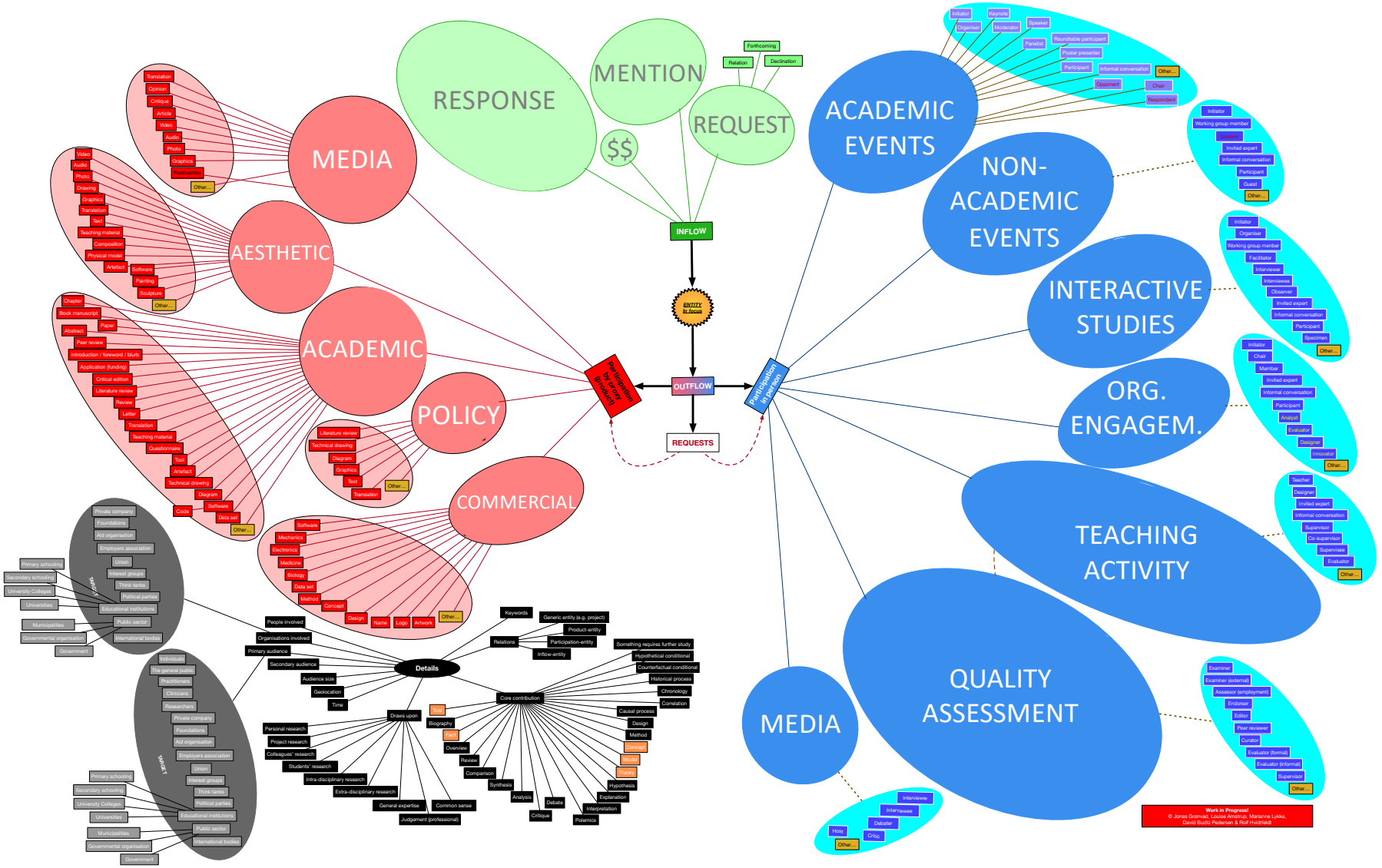


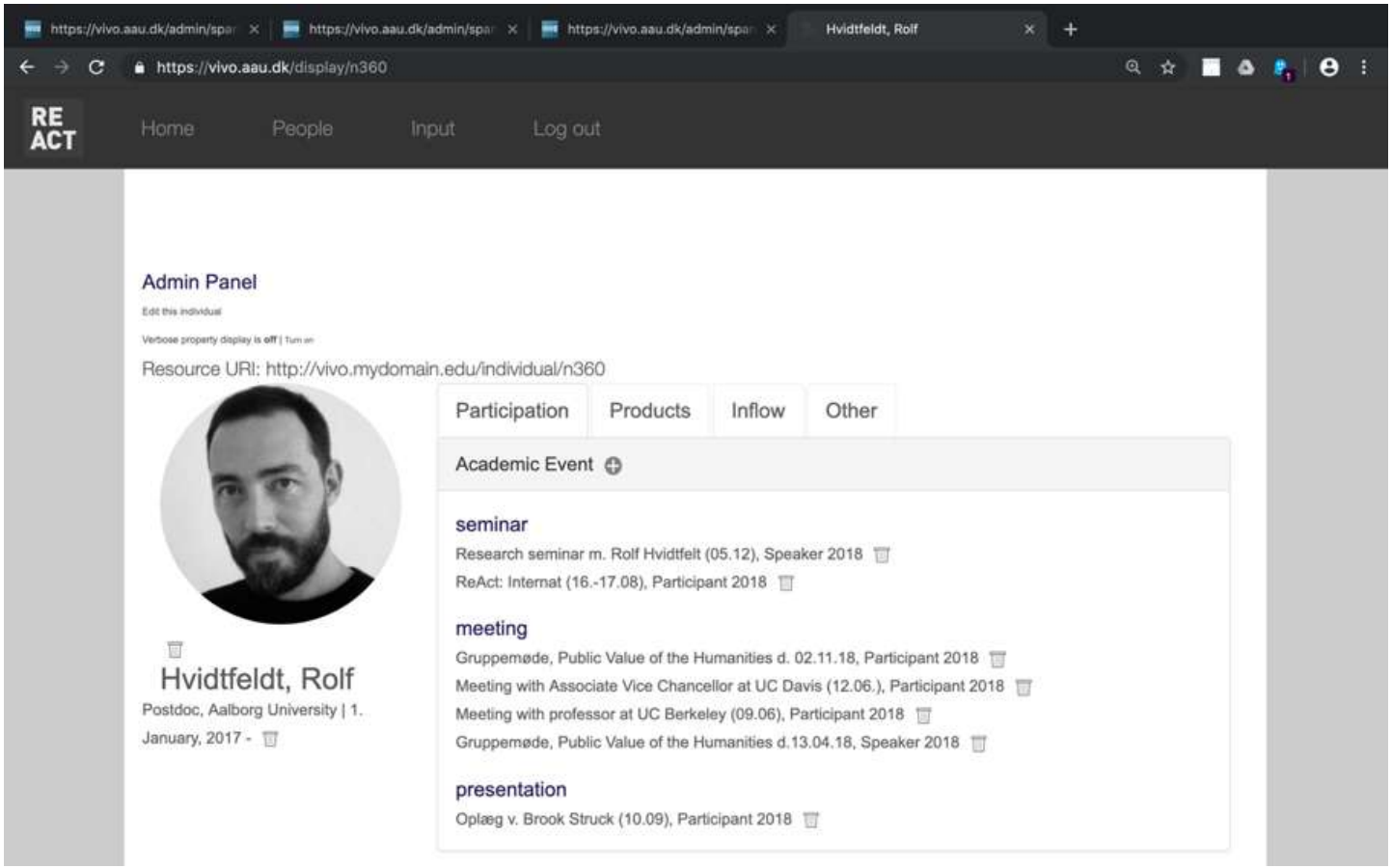
Responsible Impact Indicators

Aalborg University, Department of Communication and Psychology, 2017-2020

- Examining and testing Open Science indicators with 45+ active SSH researchers – in four steps:
  1. Define and validate bottom-up taxonomy of research outputs
  2. Real-time mapping of knowledge exchange and productive interactions
  3. Analysing bibliometric performance and linked data
  4. Synthetising findings in 5 Impact cases studies

DEPARTMENT OF COMMUNICATION AND PSYCHOLOGY


RESPONSE
MENTION
REQUEST
$$
Forthcoming
Relation
Declination
INFLOW
ENTITY in focus
OUTFLOW
REQUESTS
Participation by proxy (product)
Participation in person
MEDIA
AESTHETIC
ACADEMIC
POLICY
COMMERCIAL
ACADEMIC EVENTS
NON-ACADEMIC EVENTS
INTERACTIVE STUDIES
ORG. ENGAGEM.
TEACHING ACTIVITY
QUALITY ASSESSMENT
MEDIA
Details
Work in Progress!
© Jonas Grønvad, Louise Amstrup, Marianne Lykke, David Budtz Pedersen & Rolf Hvidtfeldt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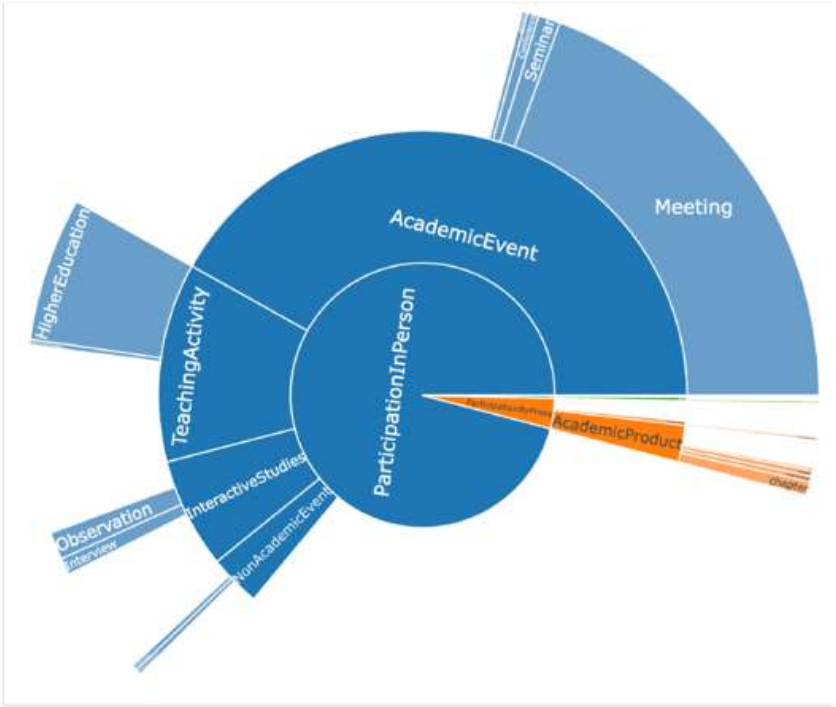
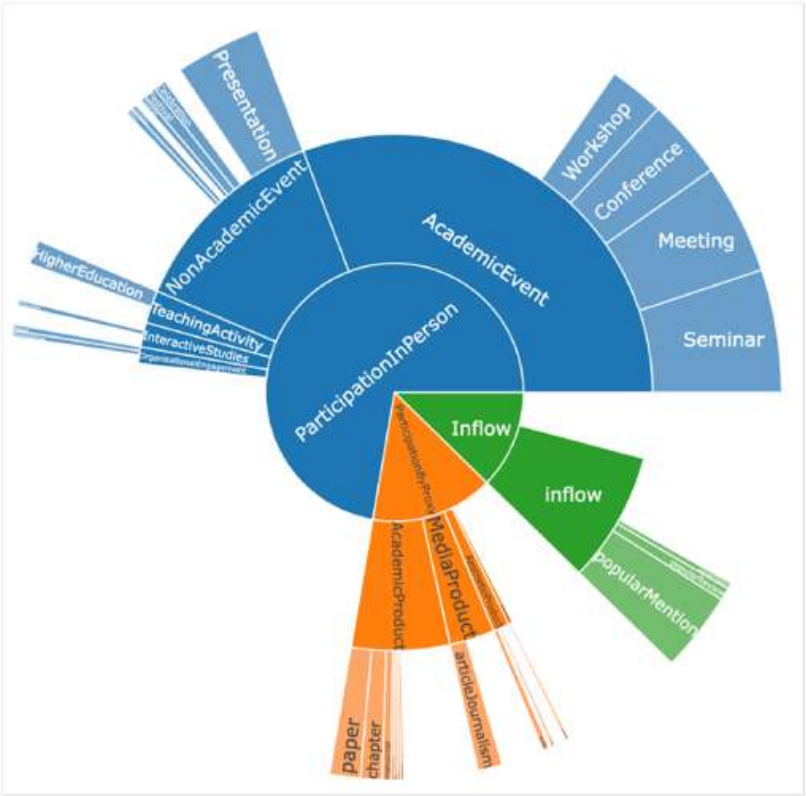
Hvidtfeldt, Rolf
https://vivo.aau.dk/display/n360
RE ACT
Home
People
Input
Log out
Admin Panel
Edit this individual
Verbose property display is off | Turn on
Resource URI: http://vivo.mydomain.edu/individual/n360
Hvidtfeldt, Rolf
Postdoc, Aalborg University | 1. January, 2017 -
Participation
Products
Inflow
Other
Academic Event
seminar
Research seminar m. Rolf Hvidtfelt (05.12), Speaker 2018
ReAct: Internat (16.-17.08), Participant 2018
meeting
Gruppemøde, Public Value of the Humanities d. 02.11.18, Participant 2018
Meeting with Associate Vice Chancellor at UC Davis (12.06.), Participant 2018
Meeting with professor at UC Berkeley (09.06), Participant 2018
Gruppemøde, Public Value of the Humanities d.13.04.18, Speaker 2018
presentation
Oplæg v. Brook Struck (10.09), Participant 2018





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mapping the dynamics of the humanities

Data collection and feedback

Aalborg University, Department of Communication and Psychology, 2017-2020

- 452 meetings (including Skype- and phone calls) leading to 8.000 data points
- Approximately 18% of participants have independently been responsible for their own registration
- Positive feedback: participants hope ReACT will lead to more appreciation of the “invisible” and informal work

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mapping the dynamics of the humanities

Analysis and Application of VIVO Data

Aalborg University, Department of Communication and Psychology, 2017-2020

- Creates unique overview of research activities, stakeholder engagement, impact potential and supports institutional memory
- Useful for impact case studies, identity and track network, grant applications, career development, self-evaluation etc.
- The ReACT VIVO taxonomy has been used as a tool to e.g. facilitate dialogue about impact assessment in STEM (WP2c)
- Caution about short-termism: what is successful (engagement)
- The WP has overall been successful

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To have impact, practicing Open Science must be accompanied by a willingness to discuss what it means with audiences of various scientific backgrounds

Banks (2017)

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Thank you for the attention

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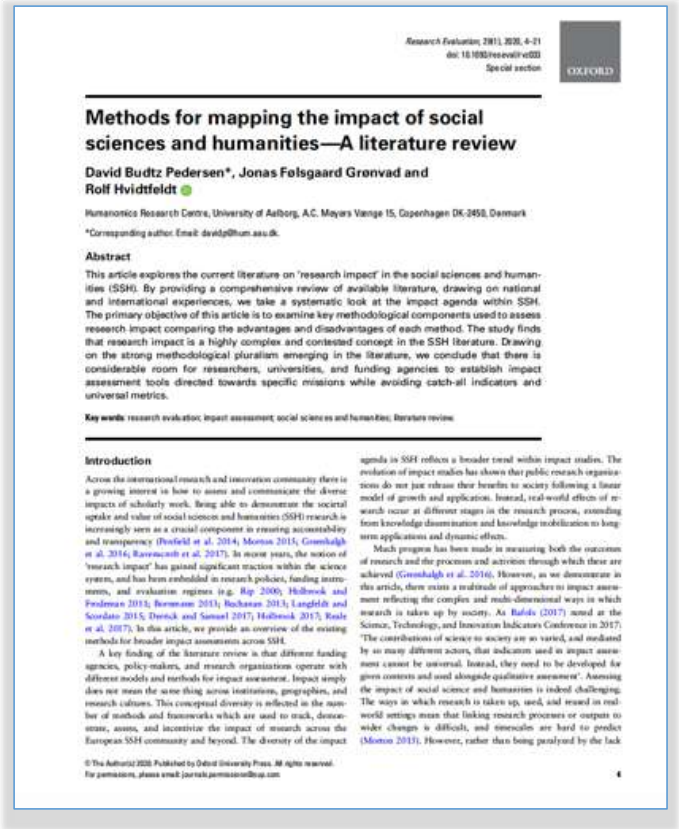
Twitter: @HumanomicsMap
Website: http://mapping-humanities.dk

Contributions from Rolf Hvidtfeldt, Louise Amstrup, Marianne Lykke & Jonas Grønvad.



Research Evaluation, 29(1), 2020, 4–21
doi: 10.1093/reseval/rvz033
Special section

OXFORD

Methods for mapping the impact of social sciences and humanities—A literature review

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Abstract

This article explores the current literature on 'research impact' in the social sciences and humanities (SSH). By providing a comprehensive review of available literature, drawing on national and international experiences, we take a systematic look at the impact agenda within SSH. The primary objective of this article is to examine key methodological components used to assess research impact comparing the advantages and disadvantages of each method. The study finds that research impact is a highly complex and contested concept in the SSH literature. Drawing on the strong methodological pluralism emerging in the literature, we conclude that there is considerable room for researchers, universities, and funding agencies to establish impact assessment tools directed towards specific missions while avoiding catch-all indicators and universal metrics.

Key words: research evaluation; impact assessment; social sciences and humanities; literature review.

Introduction

Across the international research and innovation community there is a growing interest in how to assess and communicate the diverse impacts of scholarly work. Being able to demonstrate the societal uptake and value of social sciences and humanities (SSH) research is increasingly seen as a crucial component in ensuring accountability and transparency (Penfield et al. 2014; Morton 2015; Greenhalgh et al. 2016; Ravenscroft et al. 2017). In recent years, the notion of 'research impact' has gained significant traction within the science system, and has been embedded in research policies, funding instruments, and evaluation regimes (e.g. Rip 2000; Holbrook and Frodeman 2011; Bornmann 2013; Buchanan 2013; Langfeldt and Scordato 2015; Derrick and Samuel 2017; Holbrook 2017; Reale et al. 2017). In this article, we provide an overview of the existing methods for broader impact assessments across SSH.

A key finding of the literature review is that different funding agencies, policy-makers, and research organizations operate with different models and methods for impact assessment. Impact simply does not mean the same thing across institutions, geographies, and research cultures. This conceptual diversity is reflected in the number of methods and frameworks which are used to track, demonstrate, assess, and incentivize the impact of research across the European SSH community and beyond. The diversity of the impact agenda in SSH reflects a broader trend within impact studies. The evolution of impact studies has shown that public research organizations do not just release their benefits to society following a linear model of growth and application. Instead, real-world effects of research occur at different stages in the research process, extending from knowledge dissemination and knowledge mobilization to long-term applications and dynamic effects.

Much progress has been made in measuring both the outcomes of research and the processes and activities through which these are achieved (Greenhalgh et al. 2016). However, as we demonstrate in this article, there exists a multitude of approaches to impact assessment reflecting the complex and multi-dimensional ways in which research is taken up by society. As Bafoils (2017) noted at the Science, Technology, and Innovation Indicators Conference in 2017: 'The contributions of science to society are so varied, and mediated by so many different actors, that indicators used in impact assessment cannot be universal. Instead, they need to be developed for given contexts and used alongside qualitative assessment'. Assessing the impact of social science and humanities is indeed challenging. The ways in which research is taken up, used, and reused in real-world settings mean that linking research processes or outputs to wider changes is difficult, and timescales are hard to predict (Morton 2013). However, rather than being paralyzed by the lack

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Supported by

Ministry of Higher Education and Science – Denmark